

## PROPOSED PROJECTS DESCRIPTION AND EXISTING INFRASTRUCTURE

As described in this and previous technical memoranda, a group of projects for urban irrigation were evaluated and selected to mitigate the irrigation demand. Table 25 shows the list of these proposed projects and the expected facilities needed. The amount of benefit or recovery will determine the capacity necessary for the pipes and pumps.

**Table 25**  
**Proposed Sub-regional Projects Summary**

<b>No.</b>	<b>Alternatives</b>	<b>Benefit or Recovery Capacity (MGD)</b>	<b>No. of Wells</b>	<b>Infrastructure needed</b>
1.	Golden Gate Canal ASR – 17 <sup>th</sup> Ave.	20	28	Intake system, pumping station, ASR wells and chemical treatment system
2.	Golden Gate Canal ASR – Airport Road	25	35	Intake system, pumping station, ASR wells and chemical treatment system
3.	Faka Union Canal ASR	25	35	Intake system, pumping station, ASR wells and chemical treatment system
4.	Cocohatchee River ASR	5	8	Intake system, pumping station, ASR wells and chemical treatment system
5.	Kehl Canal ASR	12	18	Intake system, pumping station, ASR wells and chemical treatment system
6.	North Collier \ Bonita Springs Interconnect	10.5	15	Pumping station, ASR wells, chemical treatment system and interconnect piping. Not exclusive of Alternatives 9 and 13.
7.	Naples \ South Collier Interconnect	12	28	Pumping station, ASR wells, chemical treatment system and interconnect piping. Not exclusive of Alternatives 10 and 11.
8A/8B.	Pelican Bay and Collier County North	8.1	13	Pumping station, ASR wells, and chemical treatment system
9.	Collier County South	6.6	11	Pumping station, ASR wells, and chemical treatment system
10.	Naples	5.4	14	Pumping station, ASR wells, and chemical treatment system
11.	Golden Gate	0.5	2	Pumping station, ASR wells, and chemical treatment system
12.	Bonita Springs Utilities	2.4	5	Pumping station, ASR wells, and chemical treatment system

<b>No.</b>	<b>Alternatives</b>	<b>Benefit or Recovery Capacity (MGD)</b>	<b>No. of Wells</b>	<b>Infrastructure needed</b>
13	North Collier / South Collier Interconnect	14.7	21	Pumping station, ASR wells, chemical treatment system and interconnect piping. Not exclusive of Alternatives 9 and 10.
14.	Golden Gate Mine Pit	1.5	0	Intake, pumping station, and chemical treatment system
	<b>Total Benefit or Recovery Capacity</b>	<b>111.5</b>		Total does not include redundant benefit from the Interconnect Alternatives 6, 7 and 8.

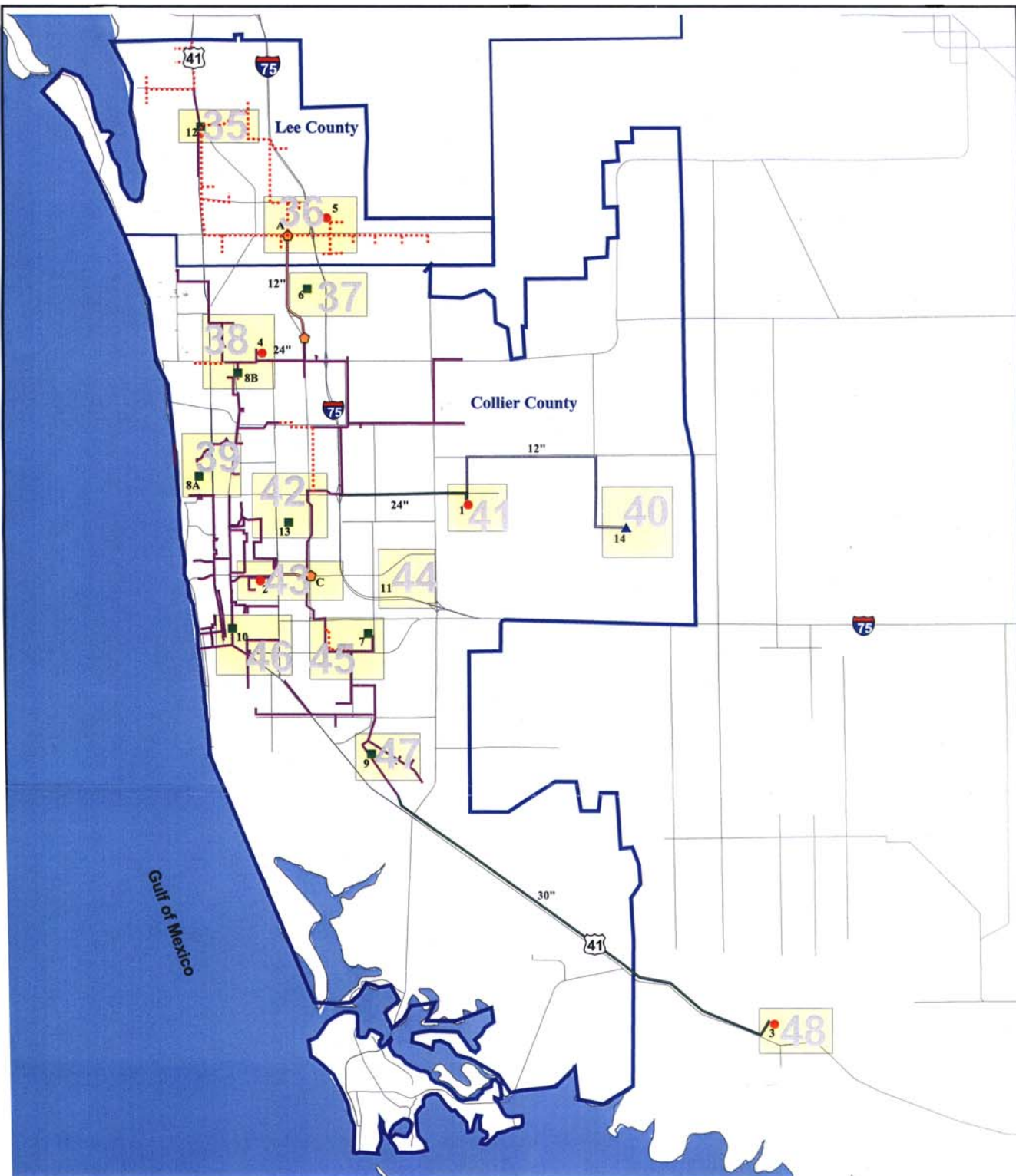
The locations of the projects listed above are presented in a series of figures, which are located in the Figure No. 34. The Index figure shows a general map of the Sub-region 1 projects. This figure serves as an index to locate the figure number where the proposed projects are shown. Interconnects including BSU- Collier County North, Collier County South, and Naples-Collier County are labeled A, B, and C on this figure. Proposed locations are based on general locations and do not include land use, survey, property assessment or any other property-specific considerations.

Figure35 presents Project No. 12, the BONITA SPRINGS UTILITIES RECLAIMED WATER ASR. The proposed location of this project is near the intersection of Old US 41 and US 41, and across from the Bonita Springs Utilities Wastewater Treatment Plant. Currently, a reclaimed water pipeline conveys treated wastewater from the WWTP. The ASR well system will be connected to the existing reclaimed water system.

Figure 36 presents Project No. 5, KEHL CANAL ASR and the north portion of the BSU - COLLIER COUNTY NORTH Interconnect. The proposed location for the project is near Grande Road, North of Bonita Beach Road, and east of I-75. It also shows the location of the proposed BSU-Collier County Interconnect. The interconnect will be located west of I-75 on Livingston Road, south of Bonita Beach Road. The interconnect extends South along Livingston Road to Immokalee Road.

Project No. 6, - BSU COLLIER COUNTY NORTH RECLAIMED WATER ASR Site is shown on Figure 37. The proposed location for this project is west of I-75 and east of Livingston Rd., just South of the Lee County and Collier County border. The 12-inch interconnect that will run north to south on Livingston Road, will transfer the water from the ASR wells. The COLLIER COUNTY SOUTH Interconnect is also shown on this figure. This project has been labeled B for identification purposes. This project's location is North of Immokalee Road, and at the east end of Piper Blvd. An existing 24-inch transmission line is also shown in this figure.

Figure 38, shows two projects. Project 4 - COCOHATCHEE RIVER ASR wells and Project 8B - COLLIER COUNTY NORTH RECLAIMED WATER ASR. The proposed location for Project 4 is located near the Cocohatchee Canal, north of Immokalee Rd, and east of Wading Bird Circle. The recovered water will discharge into an existing 24-inch reclaimed water transmission line along Immokalee Road. Project 8B is located near the Collier Co. North WWTP, east of Goodlette Rd., south of Immokalee Rd. The recovered water will discharge into an existing 20-inch reclaimed water transmission line.



# **LEGEND:**

## **Interconnect Locations**

- A. BSU - Collier County North
- B. Collier County South
- C. Naples-Collier County South

## **Possible Surface Water ASR Sites**

- 1. Golden Gate Canal at 17th Ave.
- 2. Golden Gate Canal at Airport Rd.
- 3. Faka Union Slough
- 4. Cocohatchee River
- 5. Kehl Canal

## **Possible Reclaimed Water ASR Sites**

- 6. BSU - Collier County North Interconnect
- 7. Naples - Collier County South Interconnect
- 8A. Pelican Bay
- 8B. Collier County North
- 9. Collier County South
- 10. Naples
- 11. Golden Gate
- 12. Bonita Springs Utilities
- 13. Collier County North - Collier County South Interconnect

## **Mine Pits**

- 14. Golden Gate
- Exist. Reuse Trans Lines
- Prop. Reuse Trans Lines
- Interconnect Piping
- ASR Piping
- Mine Pit Piping
- Coast Line
- Major Roads
- County Boundary
- Water

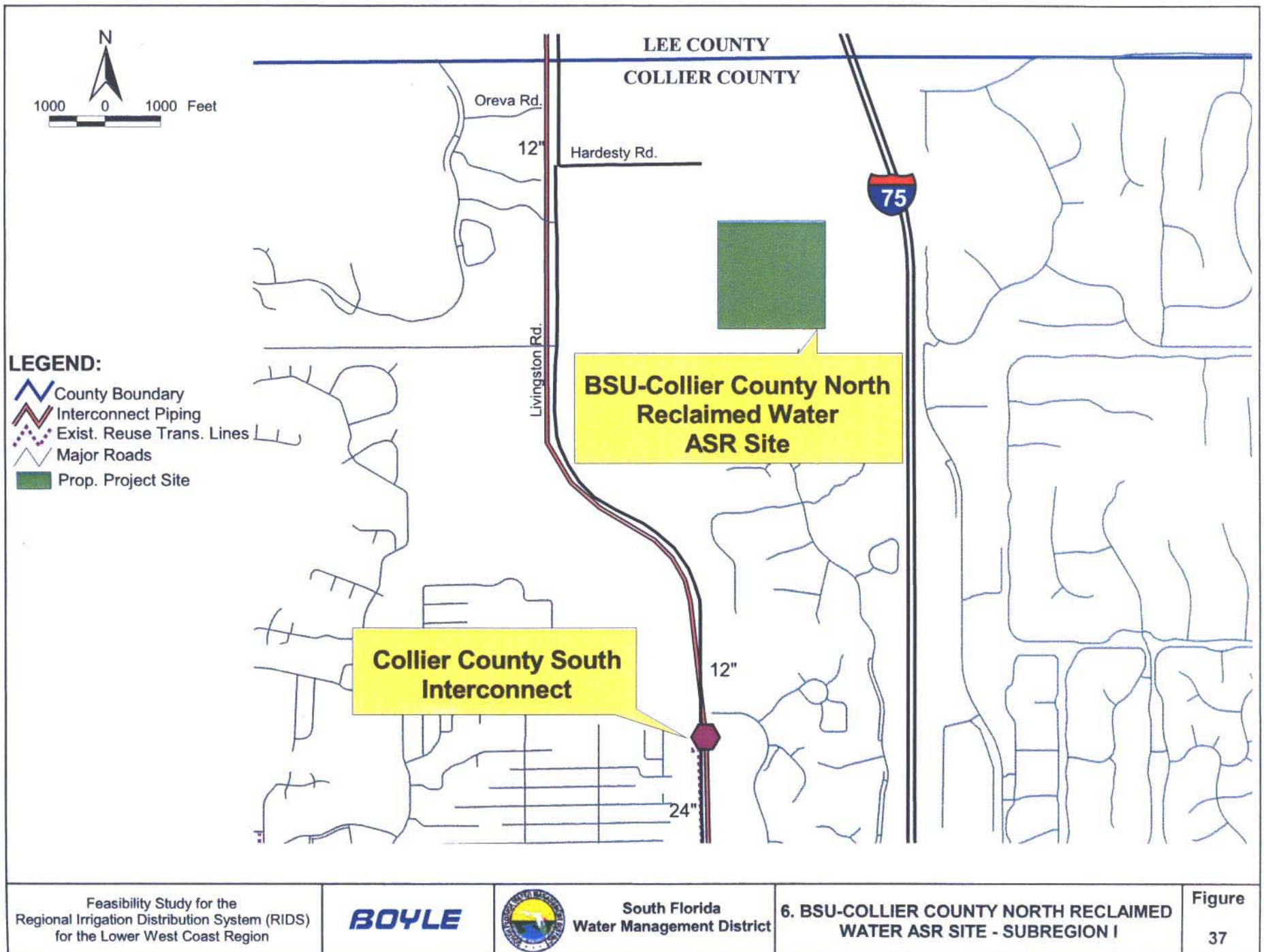


**1** Figure Number

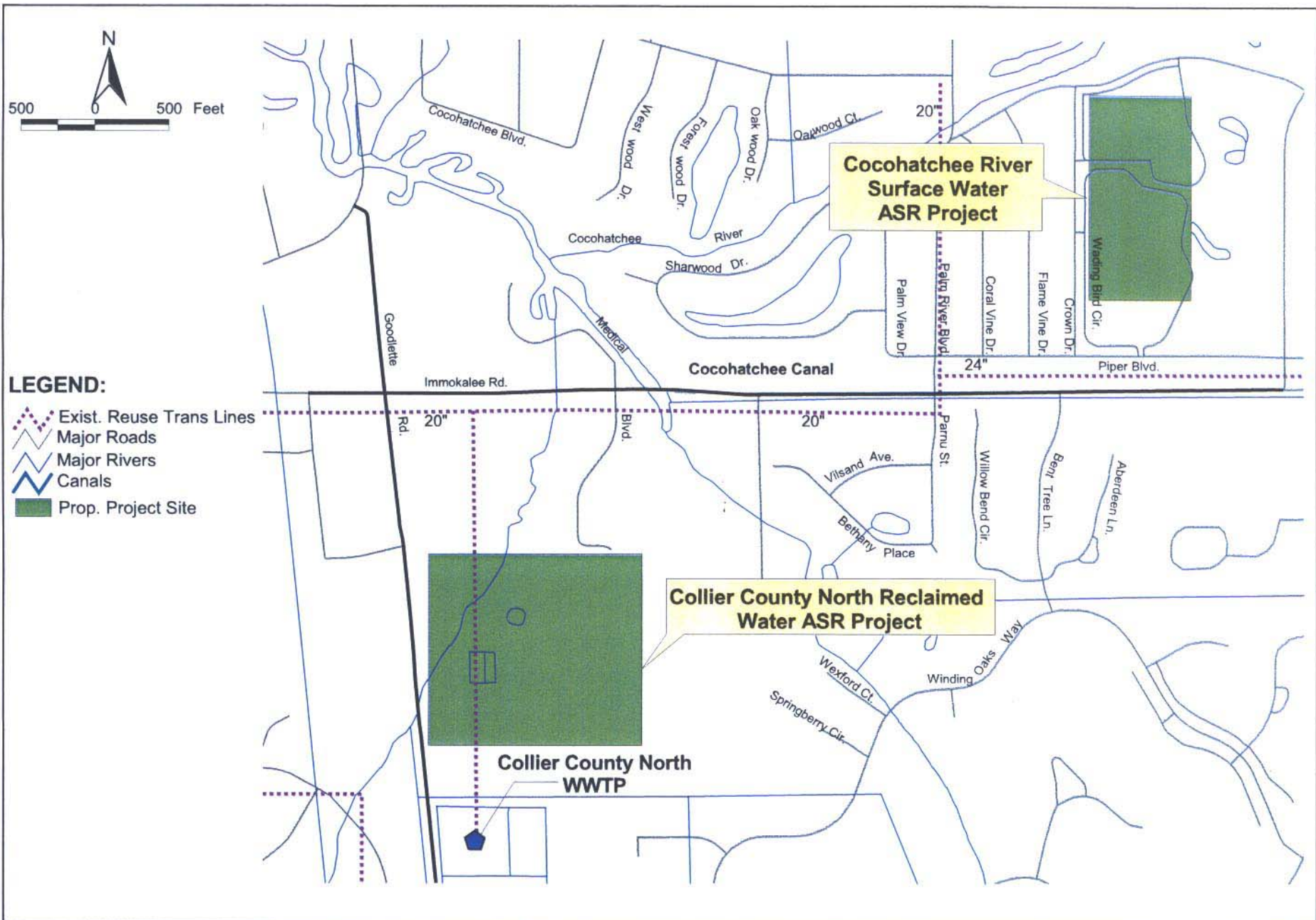












The proposed location for Project No. 8A- PELICAN BAY RECLAIMED WATER ASR is presented on Figure 39. The project will be located west of US-41 /Tamiami Trail, near the Pelican Bay WWTP, south of Watergate Way.

Figure 40 presents Project 14- GOLDEN GATE MINE PITS is proposed to be located south of Frangipani Avenue and the Golden Gate Canal. A 12-inch pipeline will convey the recovered water to the distribution system.

Figure 41 presents Project 1-GOLDEN GATE CANAL AT 17<sup>TH</sup> AVENUE, a surface water ASR project that is proposed to be located south of White Boulevard, west of 31<sup>st</sup> Street SW and east of 39<sup>th</sup> Street SW. It is also located near the Cypress Canal. The project will receive water from the 12-inch transmission line from the mine pits project and a new 24-inch pipeline will interconnect with the existing system near Pine Ridge Road and I-75.

Figure 42 presents Project 13 - NORTH COLLIER COUNTY / SOUTH COLLIER COUNTY ASR wellfield, which will be located east of Livingston Road South, between Pine Ridge Road and Vanderbilt Drive.

Figure 43 shows two projects. Project 2 - GOLDEN GATE CANAL AT AIRPORT ROAD Surface Water ASR and Project 7- NAPLES-COLLIER COUNTY SOUTH. Project 2 is located west of Airport Road North and south of Golden Gate Parkway. The proposed location for Project 7 is at the southeast corner of Livingston Road South and Golden Gate Parkway.

Figure 44 presents Project 11-GOLDEN GATE RECLAIMED WATER ASR. The proposed location of this project is south of the Golden Gate WWTP, north of I-75 and east of Santa Barbara Blvd.

Figure 45 shows Project 10-NAPLES – COLLIER COUNTY SOUTH Reclaimed Water ASR. This project is proposed to be located south of Radio Road, north of Davis Boulevard and east of Santa Barbara Boulevard.

Figure 46 presents Project 10 - Naples Reclaimed Water ASR. The location of this proposed project would be south of the Naples WWTP (located north of 5<sup>th</sup> Ave. N.), east of Goodlette Road North and west of North Road.

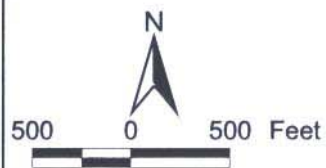
Figure 47 shows Project 9 - Collier County South Reclaimed Water ASR. This project would be located east of the Collier County WWTP, North of Tamiami Trail (US-41), and south of Lely High School Road.

Figure 48 presents Project 3 - FAKA UNION SLOUGH Surface Water ASR. This project's location would be west of the Faka Union Canal, north of the Tamiami Canal and Tamiami Trail (US-41).

### **Existing Infrastructure**

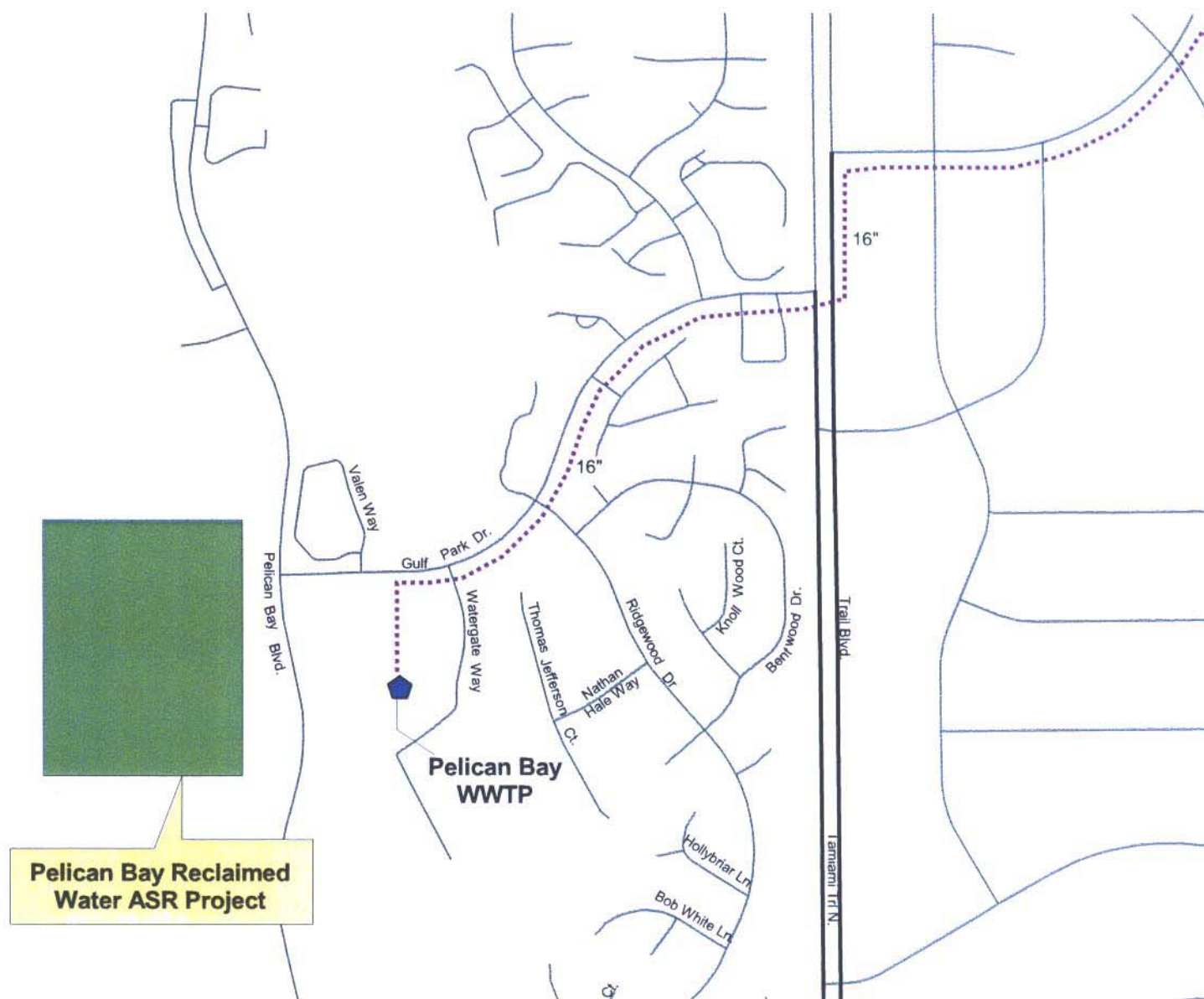
Currently Naples, Collier County and Bonita Springs Utilities have existing reclaimed water distribution systems. The proposed projects will use the existing and proposed infrastructure as much as practically possible.

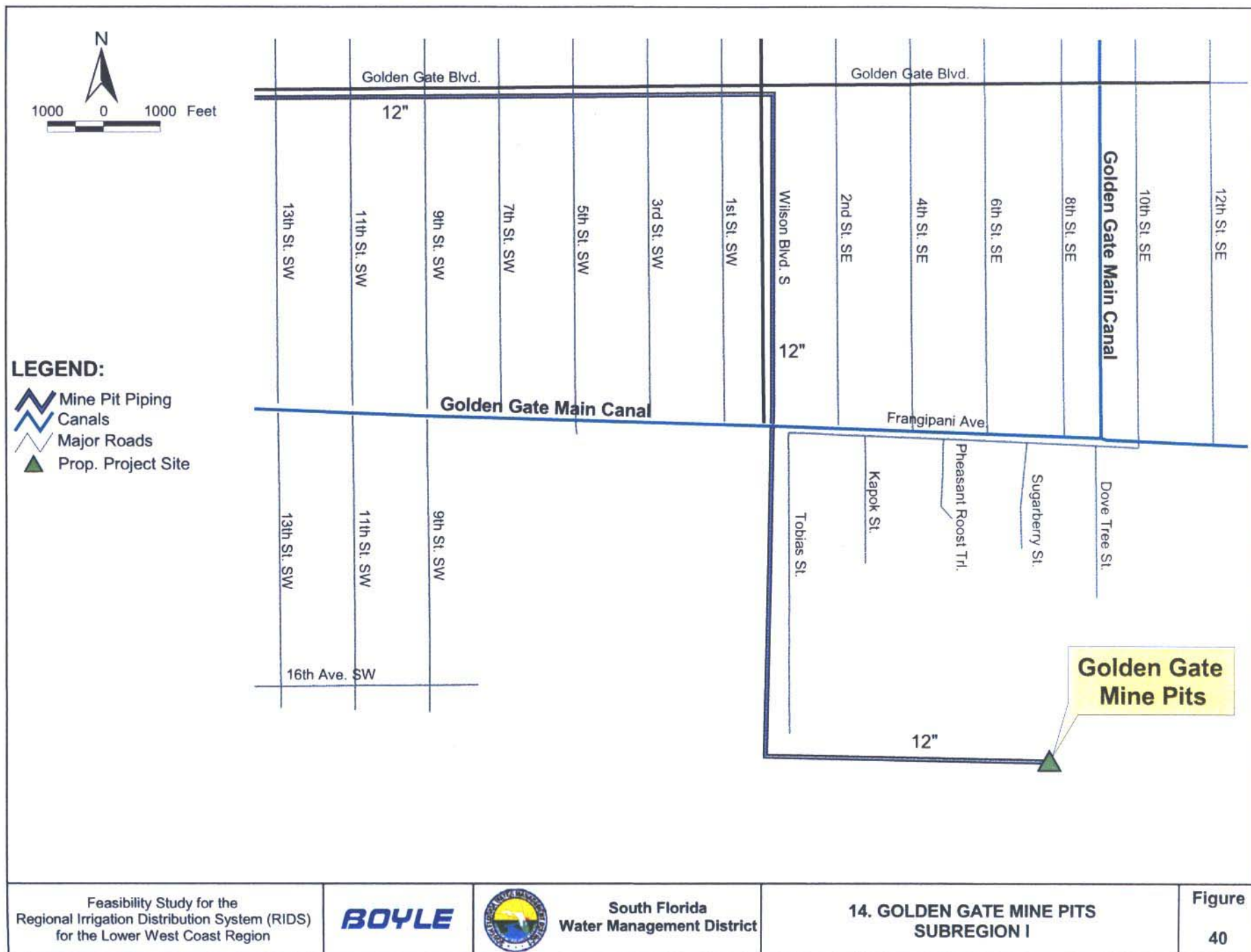




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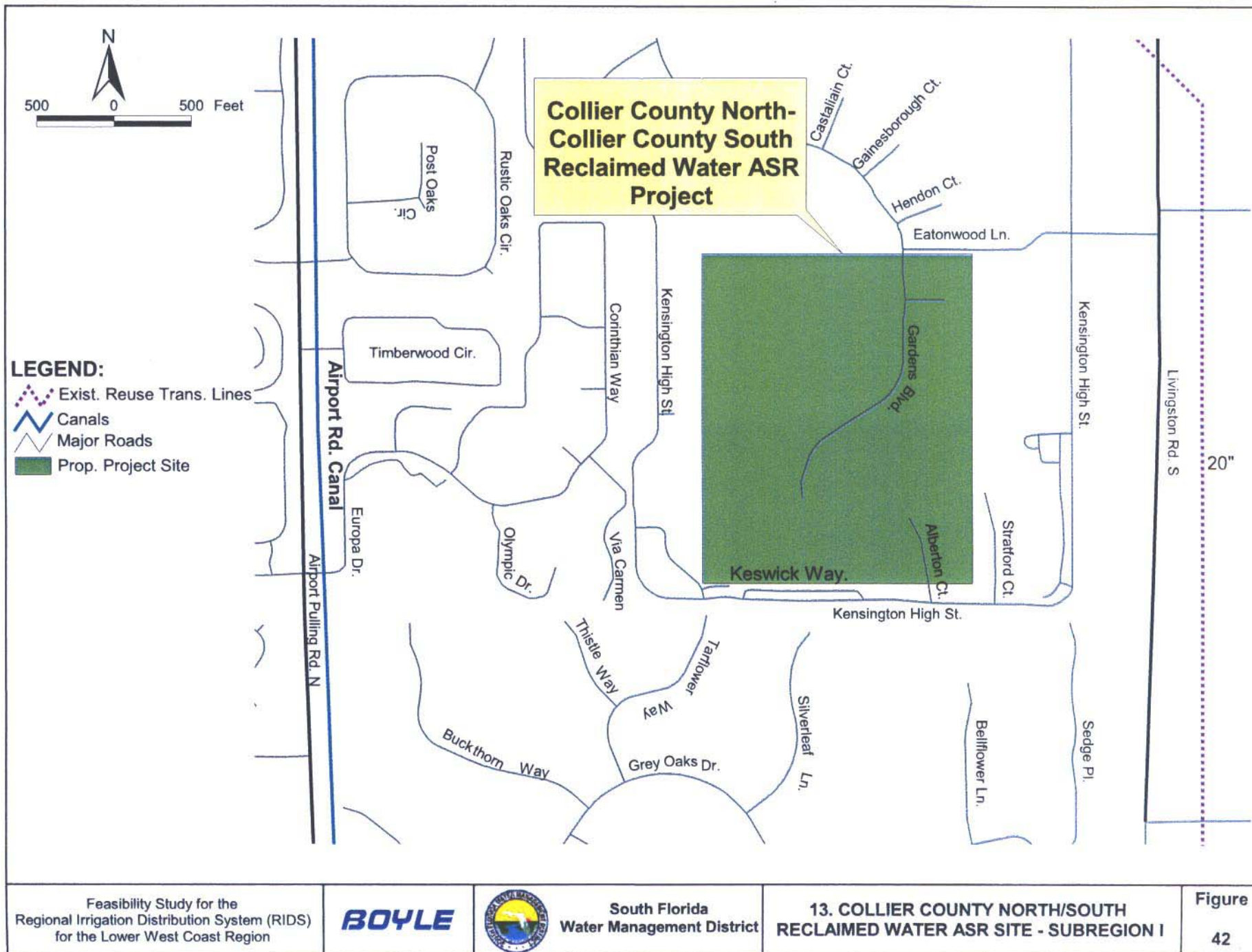
- Exist. Reuse Trans Lines
- Major Roads
- Prop. Project Site



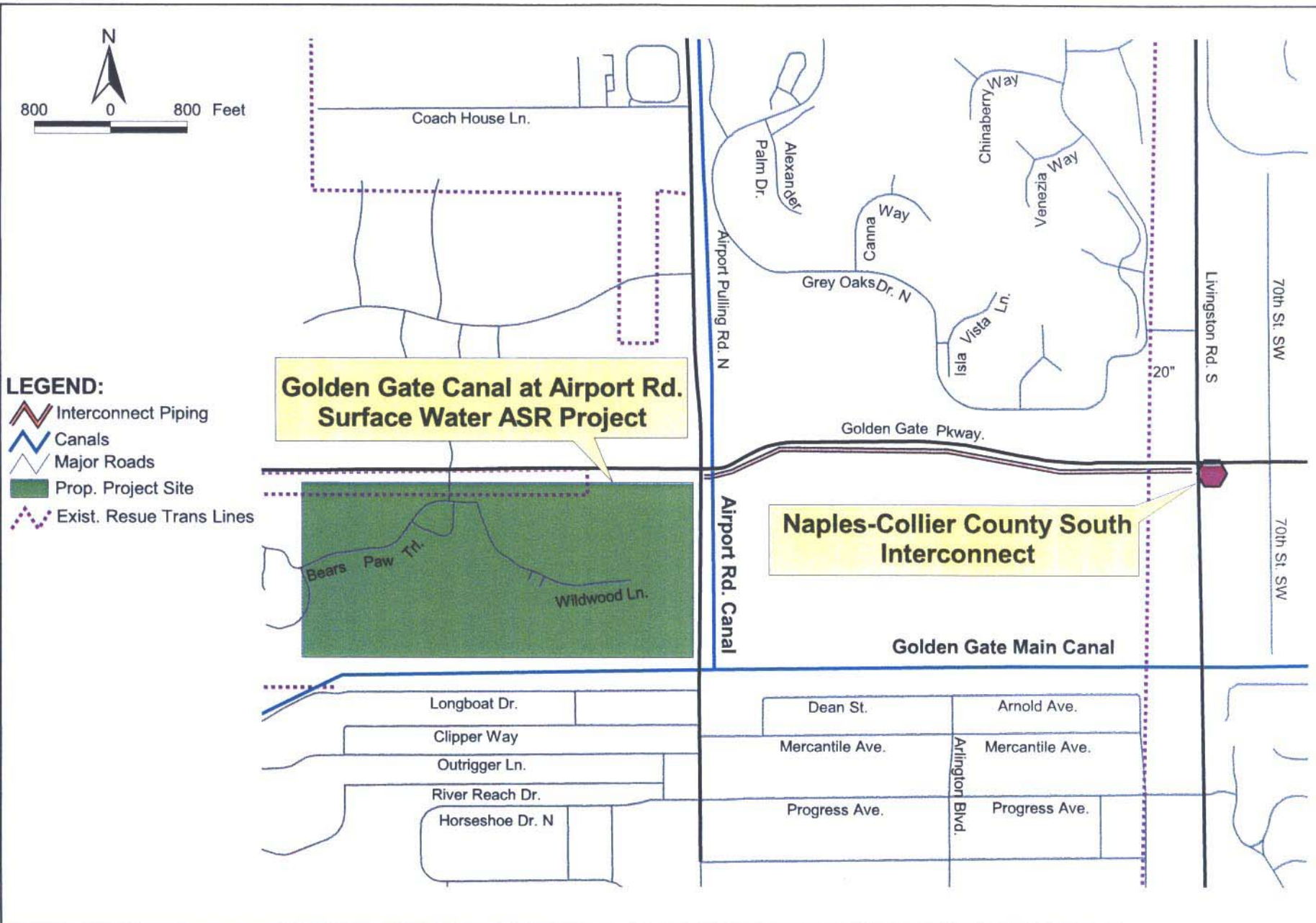






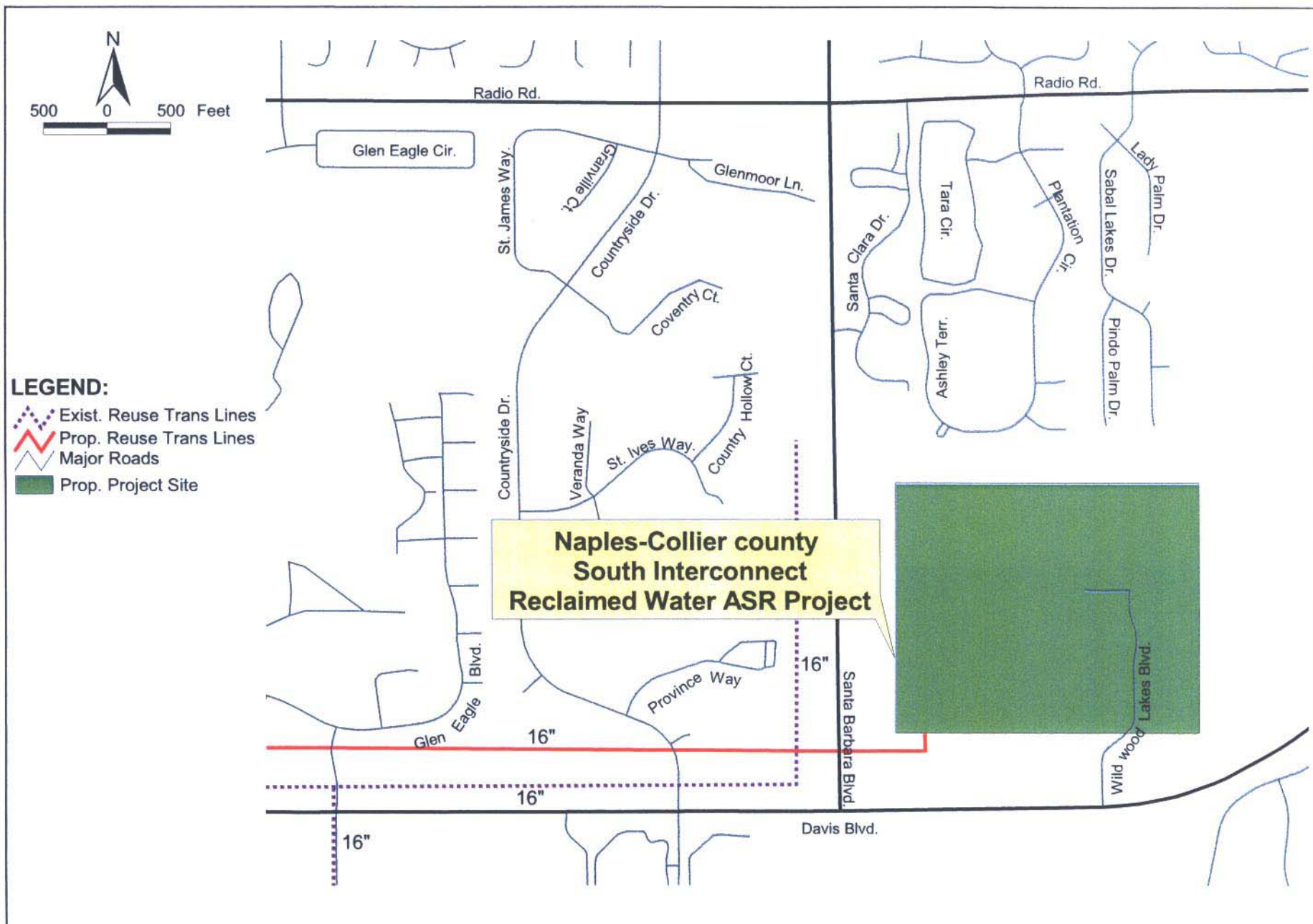


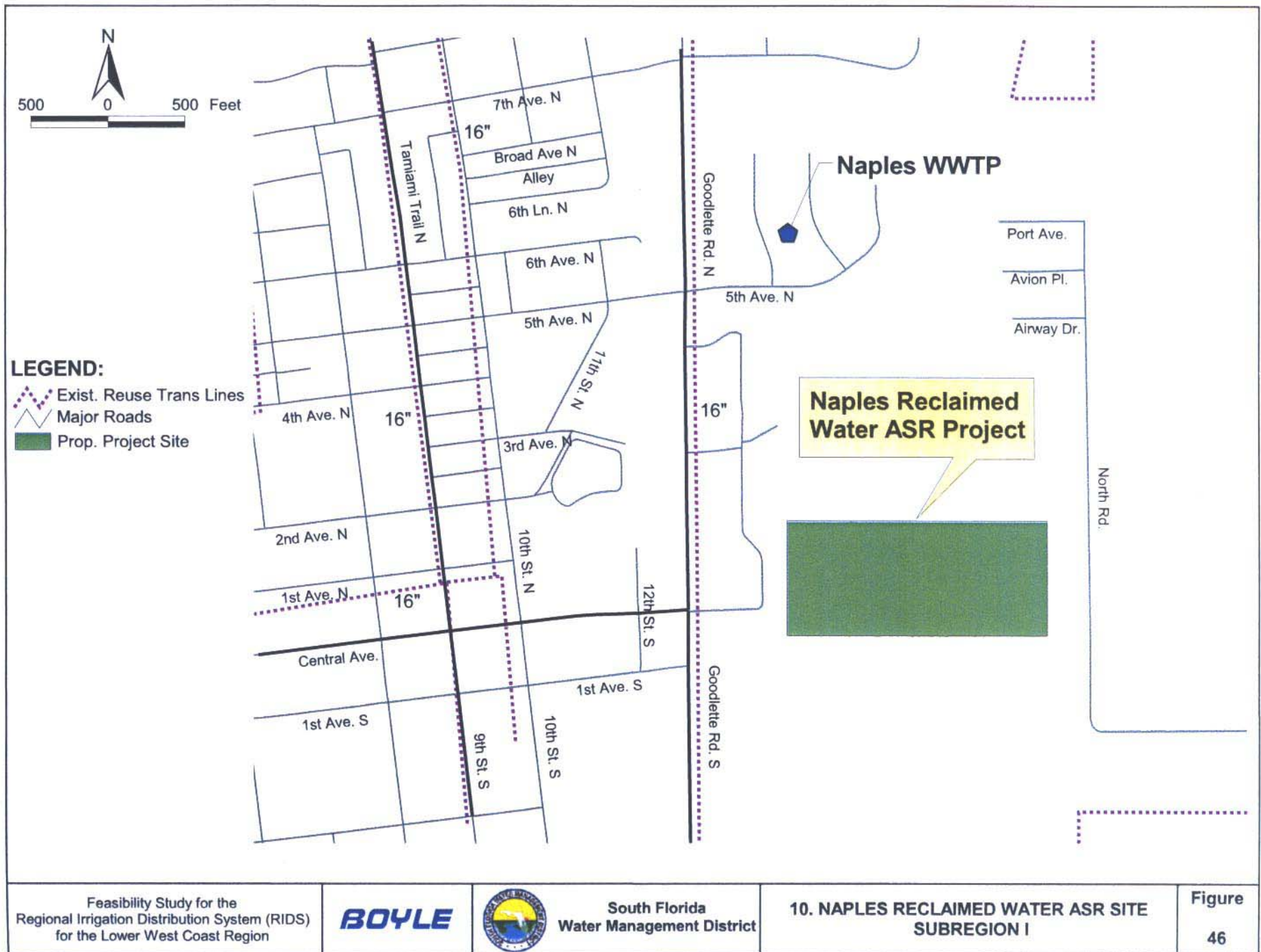




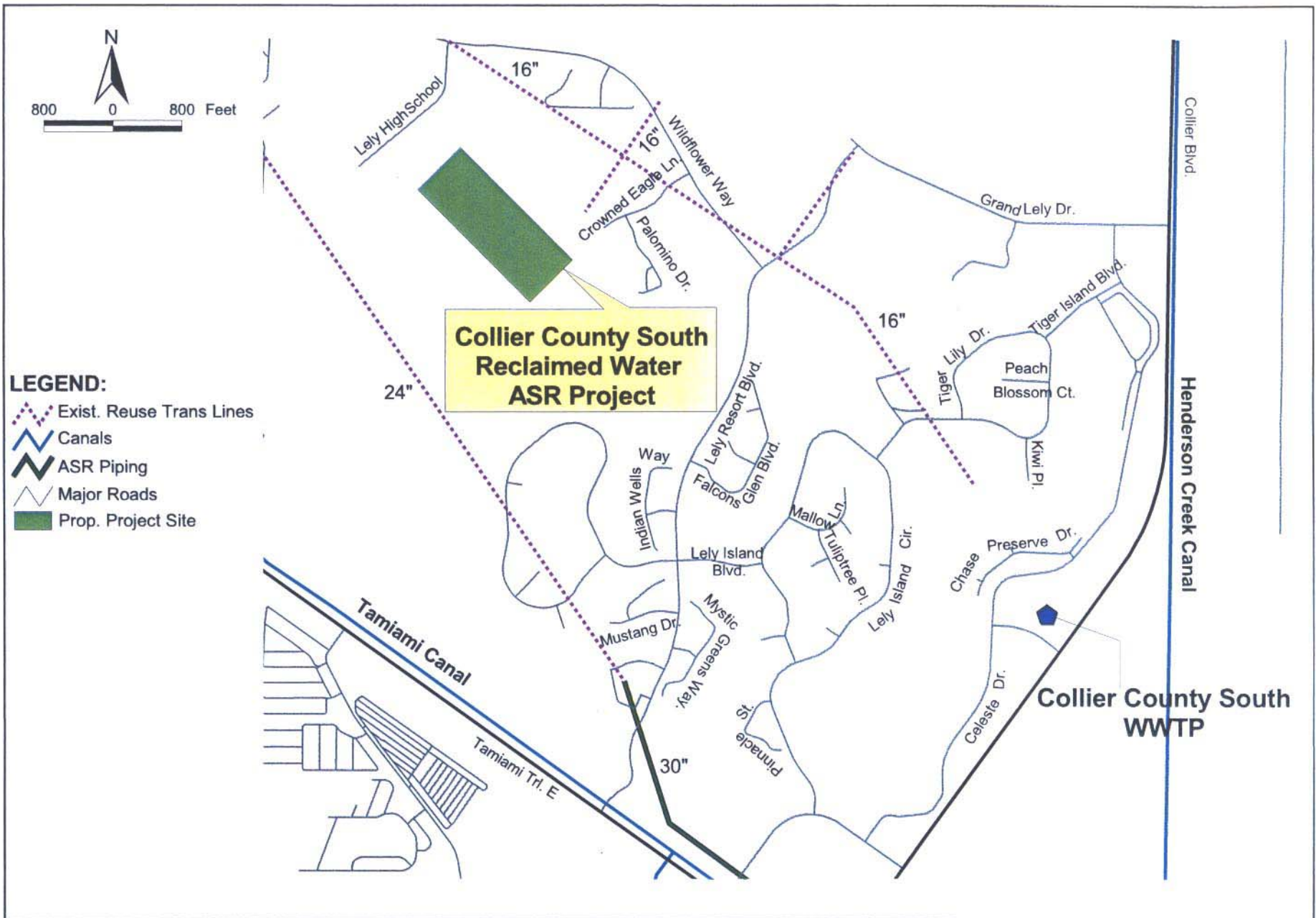


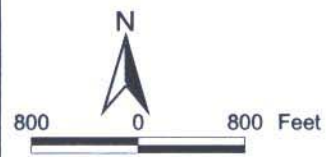












**Faka Union Slough  
Surface Water ASR Project**

- LEGEND:**
- Canals
  - ASR Piping
  - Major Roads
  - Prop. Project Site

